

REMARKS

Claim Rejections under 35 USC sec. 112

Claim 7 has been amended to indicate the proper claim dependency.

Claim Rejections under 35 USC sec. 102

Claim 1 was rejected as being anticipated by U.S. patent 6,411,780 to Maruyama. The Examiner noted that "...Maruyama describes CPU 28 (or processor) that receives a remote control signal (or first light pulse) and then is set to a self-timer mode after receiving the signal, hence the duration (or lapse of the time period) must be greater than the duration of the first light pulse itself...".

Maruyama states, at col. 8, Lines 40-49:

When flag F_SELF is set or when step S54 determines that a remote control signal is received, the CPU 28 provides a delay (step S59). Then, the CPU 28 zero-clears flag F_SELF to release the self-timer photography mode (step S60). The delay is approximately ten seconds for the self-timer photography mode when the release button 13 is pressed. Alternatively, **the delay is approximately three seconds for the remote control photography** [emphasis supplied].

Applicant has amended claim 1 to indicate that exposure of an image is initiated "in response to an indication from the timer that lapse of a **time period essentially equal to the duration of said first light pulse** has occurred" [emphasis added].

Applicant notes that Maruyama's self-timer mode introduces a *minimum* of a **three second** delay into the camera processing sequence, and thus is not at all similar to (and thus not the same entity as), Applicant's "time period", which is "*essentially equal to the duration of said first light pulse*" in Applicant's amended claim 1. This is clearly the case because a light "pulse", as defined in Applicant's specification has a "pulse duration between approximately 250 microseconds and 4 milliseconds", and three seconds is significantly longer than a period "essentially equal to" (a maximum value of) 4 milliseconds, and in fact, is over 700 times greater in duration. A common dictionary (pick one) synonym of "pulse" is "transient". Thus, regardless of which source one chooses for a definition of "pulse", it should be apparent that three seconds is not "essentially equal to" the length of the light pulse recited in claim 1.

Therefore, Applicant believes that claim 1, as amended, is not anticipated (nor rendered obvious) by the Maruyama patent, since Maruyama does not teach a "processor [that] is programmed to initiate capture of an image in response to an indication from the timer

that lapse of a time period essentially equal to the duration of said first light pulse has occurred”.

In addition, the Examiner notes, as a ‘reason for the indication of allowable subject matter’, that

... the Prior Art also fails to teach or suggest the camera of claim 1, wherein t is a value slightly greater than the length of time it takes for said first light pulse to decay to a level of zero luminosity, and wherein said time period is equal to $n \times t$, where n is an integer representing that said camera is the n th said camera in a multiple-camera system.

Applicant points out that the above reasoning with respect to the “time period” also applies to a camera system in which N has a value of 1. Thus, if the “slightly greater” length of time distinguishes a multiple camera system from the cited art, then the same limitation (or narrower limitation, as is present in amended claim 1) should also further distinguish claim 1 over the cited art.

In the same vein, if the “slightly greater” length of time distinguishes a multiple camera system from the cited art, then the same limitation should also distinguish the single-camera claim (claim 2) over the cited art. Claim 2 recites the fact that the time period after which exposure of an image is initiated is “slightly greater than the length of time it takes for said first light pulse to decay to a level of zero luminosity”, and thus the claim should be allowable, for this reason, in addition to the reasons analogous to those presented above with respect to claim 1.

The Examiner stated:

Referring to claim 2, Maruyama describes the camera of claim 1 wherein the time period is slightly greater than the length of time it takes for said light pulse to decay to a level of zero luminosity. Specifically, Maruyama describes a function F_SELF , hence the luminant signal (or first light pulse must be zeroed or completed so as to accomplish the determining (i.e zero luminosity) (Maruyama: column 8, lines 40-49).

However, Applicant asserts that there is no determination in Maruyama that the specific time period recited in claim 2 (“slightly greater than the length of time it takes for said first light pulse to decay to a level of zero luminosity”) has passed (prior to performing *any* function). Function F_SELF only determines if the camera is set to self timer mode, and as clearly indicated in the passage from Maruyama (column 8, lines 40-49) quoted above, Maruyama’s camera waits for at least three seconds before initiating image capture, which is

substantially longer than a time period "slightly greater" than the maximum 4 millisecond decay time of the recited light pulse. Therefore, Applicant believes that claim 2 is also not anticipated (nor rendered obvious) by the Maruyama patent.

In addition, Applicant believes that claims 3 – 12 should also be allowable, since these claims depend from claim 1, which, as amended, is believed to now be allowable.

Claim Rejections under 35 USC sec. 103(a)

Claim 6 was rejected over Maruyama, claims 10–12 were rejected over Maruyama in view of Sasaki (U.S. 5,721,971), claims 13 and 14 were rejected over the combination of Maruyama and Wakui (U.S. 6,262,767), and claim 15 was rejected over the combination of Maruyama, Wakui, and Sasaki, all of the above rejections being under 35 USC sec. 103(a).

Again, Applicant believes that claims 6, and 10 – 15 should be allowable, since these claims depend from claim 1, which, as amended, is believed to now be allowable. Nevertheless, Applicant has provided additional support, below, for the contention that claims 10–15 should be allowable.

Specifically, with respect to claim 10, The Examiner stated:

Sasaki describes "... a filter circuit (Sasaki: figure 3, C4, R5, and item 2, column 4, lines 4-11) that is part of the photodetection circuit (or light input device) (Sasaki: figure 3, item 3) which is attached to the control circuit (Sasaki: figure 3, item 2). Since the filter and the photodetection circuit are attached to the control circuit, the filter can be described as being in-between the photodetection circuit and the control circuit. Furthermore, the detection aspect of the regions 2 and 3 ... would, in fact, have a pre-established spectral characteristic, as they are part of a circuit containing electronic components with solidified values that are pre-established.

However, Applicant points out that, regardless of whether Sasaki's camera filter circuit contains "electronic components with solidified values that are pre-established", none of those components have any relationship, functional or otherwise, to the process of "signaling the processor that the light pulse detected by the light input device has pre-established **spectral** characteristics", as recited in Applicant's claim 10, since Sasaki's filter provides EXACTLY the same response irrespective of the applied signal, and thus cannot possibly provide any kind of a signal indicative that a detected light pulse has any particular kind of *spectral* characteristics. It should also be noted that Sasaki's "filter" merely consists of a capacitor C4 and two resistors R4, R5, which performs a 'filtering' function that is in no way

associated with "spectral" characteristics. Sasaki's description states that the "output voltage V_{ps} of the phototransistor PS1 is applied via the filter circuit to the base of transistor Q0, which then generates and issues a pulse signal V_{pss} that may vary potentially in response to the detected **amount (or intensity) of optical signal** incident on the phototransistor PS1" [emphasis supplied]. Applicant notes that "spectral" characteristics are a totally *disjoint* set of optical characteristics relative to light "intensity" characteristics, as the two characteristics are completely *independent* of one another.

Therefore, Applicant maintains that claim 10 is allowable over the cited art, since none of the cited references either teach or suggest Applicant's claimed element of "signaling the processor that the light pulse detected by the light input device has pre-established spectral characteristics".

With respect to claim 11, the Examiner stated that "Sasaki describes the sequential layout circuit (of claim 10) with the filter being coupled between the light input device and the processor (Sasaki: figure 3), which is defined as a "control" circuit and by default serves as a means of control of a device, and therefore cannot be extraneous".

Applicant notes that with respect to claim 11, it is not the control circuit which is (or is not) "extraneous", but rather that the claimed "filter" signals that "*the light pulse* detected by the light input device is not an extraneous event". Sasaki's filter (or other) circuit provides no indication whatsoever that any event detected by the camera is or is not "an extraneous event". Therefore, Applicant maintains that claim 11 is allowable over the cited art, since none of the cited references either teach or suggest Applicant's claimed element of "a filter, coupled between the light input device and the processor, for signaling the processor that the light pulse detected by the light input device is not an extraneous event".

Claim 13 was rejected for reasons similar to those used to reject claim 1, with respect to Maruyama, with the addition of a supposed "plurality of light input devices" being taught by Wakui:

Maruyama describes CPU 28 (or processor) that receives a remote control signal (or first light pulse) and then is set to a self timer mode after receiving the signal, hence the duration (or lapse of the time period) must be greater than the duration of the pulse itself... Maruyama does not teach a **plurality** of light input devices for detecting a first light pulse. Wakui describes the aforementioned "**plurality** of light input devices" for detecting said first light pulse including an image pickup circuit (attached to the CCD) (Wakui: figure 5, item 7) and a photodiode 24 (Wakui: figure 5, item 24).

However, Wakui does *not* teach a plurality of light input devices for detecting said first light pulse. The "image pickup circuit" of Wakui certainly cannot be considered to be a **light** input device, as the device receives only an *electrical signal*, and simply does not receive *light* in any form. Therefore, Wakui cannot be used a reference to teach "a plurality of light input devices" as recited in Applicant's claim 13. In addition, for reasons analogous to those discussed above with respect to claim 1, Applicant believes that claim 13, as amended, is not anticipated (nor rendered obvious) by the Maruyama patent, since Maruyama neither teaches nor suggests a "processor [that] is programmed to initiate capture of an image in response to an indication from the timer that lapse of a time period essentially equal to the duration of said first light pulse has occurred".

With respect to claim 15, the Examiner stated:

Sasaki describes an electronic photoflash device for a camera with a filter circuit (Sasaki: figure 3, C4, R5, and item 2, column 4, lines 4-11) that is part of the photodetection circuit (or light input device) (Sasaki: figure 3, item 3) which is attached to the control circuit (Sasaki: figure 3, item 2). Since the filter and the photodetection circuit are attached to the control circuit, the filter can be described as being in-between the photodetection circuit and the control circuit. Furthermore, the detection aspect of the regions 2 and 3 ... would, in fact, have a pre-established spectral characteristic, as they are part of a circuit containing electronic components with solidified values that are pre-established.

However, as Applicant indicated above, regardless of whether Sasaki's camera filter circuit contains "electronic components with solidified values that are pre-established", none of those components have any functional relationship to "signaling the processor that the light pulse detected by the light input device has pre-established *spectral* characteristics", as recited in Applicant's claim 10, since Sasaki's filter provides exactly the same response irrespective of the applied signal, and thus cannot possibly provide any kind of a signal indicative that a detected light pulse has any particular type of spectral characteristics. Sasaki's "filter" performs a 'filtering' function that is indirectly related to the detected *amount (or intensity) of optical signal* incident on the phototransistor PS1. "Spectral" characteristics of light are a totally *different* set of optical characteristics relative to light "intensity" characteristics, as the two characteristics are completely *independent* of one another.


Therefore, Applicant maintains that claim 15 is allowable over the cited art, since none of the cited references either teach or suggest Applicant's claimed element of "signaling the processor that the light pulse detected by the light input device has pre-established spectral characteristics".

Applicant believes that claims 14 and 15 should also be allowable for the additional reason that these claims depend from claim 13, which, as amended, is believed to now be allowable.

Therefore, Applicant believes, for the reasons as set forth above, that all claims in the present application, including claims 1, 7, and 13, as amended, are allowable over the cited combination of references.

Respectfully submitted,

By:


E. Michael Byorick, Reg. No. 34,131
LATHROP & GAGE L.C.
4845 Pearl East Circle, Suite 300
Boulder, CO 80301
Telephone: (720) 931-3011
Facsimile: (720) 931-3001